

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
16 December 2004 (16.12.2004)

PCT

(10) International Publication Number
WO 2004/108955 A1

(51) International Patent Classification⁷: **C12Q 1/68**,
C12N 15/00, A01K 67/00

[AU/AU]; 56 Churchill Street, Mont Albert, VIC 3127 (AU).

(21) International Application Number:
PCT/AU2004/000749

(74) Agents: HUGHES, E., John, L. et al.; 1 Nicholson Street, Melbourne, VIC 3000 (AU).

(22) International Filing Date: 4 June 2004 (04.06.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
2003902788 4 June 2003 (04.06.2003) AU

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(71) Applicant (for all designated States except US): THE WALTER AND ELIZA HALL INSTITUTE OF MEDICAL RESEARCH [AU/AU]; Royal Parade, Parkville, VIC 3052 (AU).

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

(72) Inventors; and

(75) Inventors/Applicants (for US only): CROKER, Ben [AU/AU]; 51 Kurrawan Street, Tamworth, NSW 2340 (AU). ROBERTS, Andrew [AU/AU]; 160 Highfield Road, Camberwell, VIC 3124 (AU). METCALF, Don [AU/AU]; 268 Union Road, Balwyn, VIC 3103 (AU). ALEXANDER, Warren [AU/AU]; 13 Park Street, Moonee Ponds, VIC 3039 (AU). HILTON, Doug [AU/AU]; 244 Research Road, Warrandyte, VIC 3113 (AU). NICOLA, Nicos

Published:

— with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: METHODS OF IDENTIFYING COMPOUNDS WHICH MODULATE GRANULOCYTE-COLONY STIMULATING FACTOR (G-CSF) DEPENDENT PROCESSES BY MODULATION OF THE LEVELS OF A SUPPRESSOR OF CYTOKINE SIGNALING (SOCS)

(57) Abstract: The present invention relates generally to compounds which modulate cytokine-dependent processes. More particularly, the compounds of the present invention modulate responses to a colony stimulating factor and even more particularly to granulocyte-colony stimulating factor (G-CSF) by modulating the levels of molecules which inhibit G-CSF such as but not limited to a suppressor of cytokine signaling (SOCS) and in particular SOCS-3. The present invention further contemplates methods for regulating G-CSF-dependent processes by contacting cells in vitro with or administering to a subject a compound which up- or down-regulates the level of activity of G-CSF by modulating the level or activity of a SOCS molecule such as SOCS-3. The instant compounds are further useful for modulating a range of G-CSF-induced cellular responses including neutrophil recovery after chemotherapy or radiotherapy, mobilizing stem and progenitor cells, treating infection and treating inflammatory conditions.

WO 2004/108955 A1